THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOHN SAYAH, VINOD NARAYANAN,
and PHILIP HONSINGER

_____

Appeal No. 96-0067
Application 08/075,241[1]

_____

ON BRIEF

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Before URYNOWICZ, BARRETT and LEE, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-14 under 35 U.S.C. § 103 as being unpatentable over prior art.

References Relied on by the Examiner

Liang et al. (Liang)	U.S. Patent No. 5,182,797	Jan. 26, 1993
Lazansky et al.	U.S. Patent No. 5,111,413	May 5, 1992

[1] Application for patent filed June 11, 1993.

(Lazansky)

The Rejections on Appeal

Claims 1-5, 9, and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Liang.

Claims 6-8 and 11-14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Liang and Lazansky.

The Invention

The invention is directed to an information model comprising a first data structure containing at its nodes hierarchically partitioned descriptions of data attributes, and a second data structure containing at its nodes representations and specifications of each hierarchical partition in the first data structure. Each node of the first data structure maps to a node of the second data structure, and each node of the second data structure maps to at least one node at a single hierarchical level of the first data structure. There is also an interface which encapsulates the first and second data structures from inquiring application programs.

Representative claim 1 is reproduced below:

1. An information model comprising

a first data structure containing, at respective nodes, descriptions of physical or abstracted physical attributes of a spatially partitioned physical

> structure, said descriptions of physical or abstracted physical attributes being partitioned hierarchically,
>
> a second data structure containing, at respective nodes, a nested, compacted, representation of each said hierarchical partition of said physical or abstracted physical attributes and specifications of each said hierarchical partition of said physical or abstracted physical attributes, and
>
> an interface means for encapsulating said first and second data structures from inquiring applications
>
> each said node of said first data structure mapping to a node of said second data structure and each node of said second data structure mapping to at least one node at a single hierarchical level of said first data structure.

Claim 9 is a corresponding method claim.

Opinion

We do not sustain the rejection of claims 1-14.

Initially, it should be noted that evidently, the examiner has cited to the same component in Liang as constituting both the first data structure and the second data structure. In the examiner's answer at 3, the examiner identifies a first data structure in Liang and cites to column 4, line 41. Beginning at that location, Liang reads: "The workstation state list contains data descriptions and drawing information required by the workstation to process the application model." It is apparent that the examiner regards the workstation state list as constituting the first data structure. Also in the answer at 3,

the examiner identifies a second data structure in Liang and cites to column 8, line 1. Column 8, line 1 of Liang is occupied by parts of Liang's claim 1 and reads: "a second data structure

containing parameters for controlling the processing of the data contained in the first data structure."

But it is the workstation state list which describes the necessary processing environment for processing the graphical data contained in Liang's structure storage unit (column 3, lines 61-63; column 4, lines 41-43). In light of all the claim features directed to the relationship between the first and the second data structure, it is plainly inappropriate to read both data structures on the same part. However, this mistake on the part of the examiner has not been pointed out by the appellants, and it is manifestly apparent that Liang does disclose a first data structure and a second data structure, separate from each other. In that regard, note that Liang's claim 1 explicitly recites a first data structure and a second data structure. Accordingly, we will assume that the examiner has properly identified Liang's first data structure as the hierarchical graphical data in the structure storage element, and the second data structure as including the workstation state list and the view traversal control block as is recited in Liang's claim 1.

Claim 1 requires that the second data structure contains at respective nodes thereof a representation and also specifications of each hierarchical partition of the data attributes stored in

the first data structure. The examiner has not accounted for this claim feature and the appellants have not conceded this issue. In the appeal brief at page 5, the appellants argued that there is no teaching or suggestion in Liang that a hierarchy was involved with the organization of the workstation state list. We also can find no such hierarchy with respect to the view traversal control block. In column 4, lines 56-57, Liang simply states that the "[view] traversal control block contains a list of view masks." The failure to account for this feature constitutes reversible error.

The examiner acknowledged (answer at 3) that Liang does not disclose "said first data structure being mapped to a node of said second data structure." However, the examiner simply concluded (answer at 3) that it would have been obvious to one with ordinary skill in the art to map the first data structure to the second data structure "because this allowed for manipulations of the descriptions stored in the first data structure." We reject the examiner's view, since a data structure can be directly manipulated without the nodes thereof being mapped to another data structure. The examiner also has pointed to no evidence that mapping between the nodes of data structures was a commonly recognized way to achieve data manipulation.

Moreover, the appellants have not simply claimed mapping in general. Instead, a particular manner of mapping is required. According to claim 1, each node of the second data structure maps to at least one node at a single hierarchical level of the first data structure. As can be seen in the appellants' Figure 5, all map linkages originating from a node of graph 200 lead to nodes occupying the same level of hierarchy in tree 220. The examiner has not accounted for this feature of the invention, which has not been conceded by the appellants (Br. at 8, lines 21-28). We see this deficiency as another reversible error.

It is further noted that claim 1 recites an interface means for encapsulating the first and second data structures from the inquiring applications. The examiner states (answer at 3) that Liang discloses an interface means for encapsulating, citing Liang's column 6, line 45. In the context of the appellants' invention, encapsulating data structures means having symbolic constructs, implemented by physical layers at lower levels of abstraction, which can be specially tailored to suit particular applications. See specification, page 13, lines 22-31, page 17, lines 7-13, page 18, lines 21-28. A data hiding function is implemented thereby to limit the amount of data accessed by each application. See specification, page 17, lines 11-13. The

examiner finds in Liang "an interface means for encapsulating," citing column 6, line 45, et. seq. Lines 42 to 51 of column 6 of Liang is reproduced below:

> The system control processor 112 and the graphics control processor 114 communicate through interrupts and the communication areas described, above which are stored in the system memory 113. The system control processor will first initialize graphics control processor 114 through general interface initialization. This initialization includes establishment of all interface control blocks. The SCP may next interrupt the graphic control processor to start traversal and may later stop traversal.

As the appellants correctly pointed out (Br. at 8), the cited portions of Liang do not relate to data structure encapsulation. If the examiner has interpreted data structure encapsulation to mean something else, such other meaning has not been set forth or explained. On this record, the examiner has failed to demonstrate that Liang discloses the encapsulation feature of the claimed invention.

For all of the foregoing reasons, the rejection of claims 1-5, 9 and 10 over Liang cannot be sustained.

Dependent claims 6-8 and 11-14 have been rejected over the combination of Liang and Lazansky. Lazansky has been relied on by the examiner to meet the additional features recited in the dependent claims (answer at 4). It has not been applied in a manner, as explained by the examiner, which would cure the

deficiencies of Liang. Thus, the rejection of claims 6-8 and 11-14 over Liang and Lazansky cannot be sustained.

Conclusion

The rejection of claims 1-5, 9 and 10 under 35 U.S.C. § 103 as being unpatentable over Liang is reversed.

The rejection of claims 6-8 and 11-14 under 35 U.S.C. § 103 as being unpatentable over Liang and Lazansky is reversed.

REVERSED

STANLEY M. URYNOWICZ, Jr. Administrative Patent Judge	)	
LEE E. BARRETT Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JAMESON LEE Administrative Patent Judge	)	

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